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To: [Beiler, Justin](#)
Cc: [Mohollen, Laura](#); [Ioven, Dawn](#)
Subject: St. Albans Trailer Park-Site Investigation-risk assessment
Date: Wednesday, November 08, 2017 11:05:09 AM
Attachments: [St Albans Trailer Park-risk assessment and SI Report review Nov 2017-MWG.docx](#)

Justin –

Thank you for the opportunity to review the *Site Inspection Report* for St. Albans Trailer Park in St. Albans, West Virginia. A preliminary human health risk assessment was conducted with a focus on residential exposures to soil and groundwater, as exposure to these media are expected to drive human health risk. Based on the soil and groundwater concentrations provided in the report, unacceptable risk may exist for current and future residential receptors exposed to soil and groundwater. The attached memorandum includes the risk assessment results and document-specific comments.

Please contact me with any comments, questions, or concerns.

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**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
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SUBJECT: **Review of the *Site Inspection Report*, St. Albans Trailer Park, St. Albans, West Virginia**

FROM: Martin Gehlhaus, Health Scientist
 Technical Support Branch (3HS41)

TO: Justin Bleiler
 Site Assessment Branch

DATE: November 8, 2017

Thank you for the opportunity to review the *Site Inspection Report* for St. Albans Trailer Park in St. Albans, West Virginia. A preliminary human health risk assessment was conducted with a focus on residential exposures to soil and groundwater, as exposure to these media are expected to drive risk.

General statement of risk:

Based on the soil and groundwater concentrations provided in the report, unacceptable risk may exist for current and future residential receptors exposed to soil and groundwater.

- For a current resident, exposure to soil only is expected and results in total cancer risk of $1.7\text{E-}4$ (for maximum detects) and $1.4\text{E-}4$ (excluding constituents attributed to background) and hazard indices (HI) of 2.8 (for maximum detects) and 1.7 (excluding constituents attributed to background). The COPCs are arsenic, benzo(a)pyrene, hexavalent chromium, cobalt, manganese, and thallium.
- For future residents, exposure to soil and groundwater were considered. For residential exposure to groundwater, the carcinogenic risk was $2\text{E-}5$ for both maximum detects and for constituents attributed to background and is within the acceptable risk range of $1\text{E-}4$ and $1\text{E-}6$. The HIs for residential exposure to groundwater were 8.0 (maximum detects) due to iron and manganese and 2.4 (excluding constituents that attributed to background) due to manganese. The soil risks for future residents are anticipated to be similar as current residents.
- In addition, the elastic polymer at the site may present unacceptable risk due to uncertainty regarding constituents and toxicity: particularly because 5 compounds in the material exceed their respective Maximum Concentrations of Contaminants for Toxicity Characteristic, which indicates that the waste material tested classifies as a hazardous waste according to RCRA Part 261 Subpart B.
- The risk estimates provided above are general estimates and would benefit from additional sampling and analysis. For example, 3 of the 5 groundwater monitoring wells, each of which were in closest proximity to the observed waste material, were not sampled for inorganics due to insufficient quantity of water in MWs. In addition, soil samples to further investigate the area defined as the extent of fill is recommended.

Document-specific comments:

- Throughout the document, use of COPCs in place of COCs is recommended.
- Page 8, Section 4.1 – Were PCBs and dioxins analysis included in current or previous analysis? Considering the unknown nature of chemical waste deposited on the site, a more thorough analysis of possible contaminants would be beneficial.
- Page 11, Section 5 – The appropriateness of the groundwater samples identified as ‘background’ is deferred to a hydrogeologist. The document indicates that groundwater flow “appears to flow north/northwest” but additional information, such as groundwater potentiometric measurements, are not provided.
- Page 14, Section 5.4 – Recommend additional rounds of groundwater sampling due to the insufficient quantity of groundwater in some of the wells.
- Page 19, Section 5.8 – Revise third sentence in first paragraph to reflect identification of COPCs by comparison to residential soil RSLs, not ARARs – “COPCs were identified by comparison to screening levels from the USEPA Regional Screening Levels (RSLs), USEPA Region III Ecological Risk Assessment Benchmarks, and”
- Page 25, Section 6.2 – It is recognized that the groundwater is not a current potable source; however, to address future beneficial use of the aquifer the future resident is an appropriate receptor.
- Page 27, Section 7.3 – The TCLP analysis indicates that 5 compounds exceed their respective maximum concentrations of contaminants for toxicity characteristic, which indicates that the waste material tested classifies as a hazardous waste.
- Page 28, Section 8 – Further action is recommended at the site. Actions include additional sampling of soil, groundwater, surface water, and sediment and of the unknown elastic polymer.
- Table 3A (and related tables)
 - Recommend screening constituents against cancer risk of 1E-6 and HQ of 0.1
 - Label ‘COC?’ column as ‘COPC’ to avoid confusion with ‘contaminants of concern’ (COCs) that result from human health risk assessment
 - Use RSL for chromium (VI) for ‘chromium’
 - The residential soil RSL for manganese is 1,800 mg/kg – provide in table.
- Table 5C and related tables – Use ‘Screening Level Concentration’ for column heading currently labeled as ‘Action Level Concentration.’
- Table 8 – Label ‘MCL’ column as ‘Maximum Concentration of Contaminants for Toxicity Characteristic’ to avoid confusion with MCL for GW.
- Table 8 – The concentration for trichloroethene in the waste sample exceeds the MCC for toxicity characteristic and should be highlighted/shaded as such.

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